

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for manipulating microwave radiation, comprising:
 - a mechanically stable substrate that defines the shape of a surface for reflecting microwave radiation; and
 - a metal fitting conforming to the defined shape, and providing the surface that reflects microwave radiation, wherein the metal fitting has a thickness that is insufficient for independent mechanical stability.
2. (Original) The device of claim 1 wherein the surface defines at least a portion of a microwave resonant cavity.
3. (Currently Amended) The device of claim 1, wherein the metal fitting has a thickness of the metal fitting is of greater than 10 μm .
4. (Original) The device of claim 1 wherein the surface defines at least a portion of a microwave reflector.
5. (Original) The device of claim 1 wherein the substrate comprises an insulator.
6. (Original) The device of claim 1 wherein the thickness of the metal fitting is less than 500 μm .
7. (Original) The device of claim 5 wherein the thickness of the metal fitting is less than 100 μm .
8. (Original) The device of claim 1 wherein the substrate has a coefficient of thermal expansion less than $5 \times 10^{-6}/^\circ\text{C}$.
9. (Original) The device of claim 1 wherein the metal fitting has a coefficient of thermal expansion greater than $10 \times 10^{-6}/^\circ\text{C}$.
10. (Original) The device of claim 1 further comprising a braze joint that bonds the metal fitting to the substrate.
11. (Original) The device of claim 1 wherein the metal fitting comprises silver.

12. (Original) The device of claim 1 wherein the metal fitting comprises a wrought metal.
 13. (Original) The device of claim 1 wherein the metal fitting consists of a metal that is at least 99% pure.
 14. (Original) The device of claim 1 wherein the metal fitting is bonded to the substrate via an interference fit.
 15. (Original) The device of claim 1 wherein the metal fitting has a machined surface.
 16. (Original) The device of claim 1 wherein the metal fitting completely shields the substrate from exposure to the microwave radiation.
 17. (Original) The device of claim 1 further comprising an adhesive layer between the substrate and the metal fitting.
 18. (Original) The device of claim 17, wherein the adhesive layer has a thickness of less than 1.0 μm .
 19. (Original) The device of claim 1, wherein the metal fitting has a ring shape having an inner diameter and an outer diameter.
 20. (Original) The device of claim 19, wherein the inner diameter is machined to match an outer diameter of the substrate.
 21. (Original) The device of claim 19, wherein the outer diameter is machined to match an inner diameter of the substrate.
 22. (Original) The device of claim 1, wherein the substrate and the metal fitting have a compatible thermal behavior.